a.) Amendments to the Claims

1. (Currently Amended) A <u>method to inhibit</u> proteasome <u>inhibitor</u> comprising, as an active ingredient, a step of administering to a mammal an effective amount of a carboxylic acid derivative a compound represented by the formula (I) or a pharmaceutically acceptable salt thereof:

$$\begin{array}{c|c}
R^1 & & & & \\
R^2 & & & & \\
R^2 & & & & \\
R^3 & & & & \\
\end{array}$$
(I)

<wherein wherein

m and n are the same or different and independently represent an integer of 0 to 10;

p represents 0 or 1;

R¹ represents a hydrogen atom, substituted or unsubstituted alkyl, substituted or unsubstituted aralkyl, substituted or unsubstituted aralkyl, substituted or unsubstituted aryl or NR⁶R⁷ {wherein R⁶ represents a hydrogen atom, substituted or unsubstituted alkyl, or substituted or unsubstituted aralkyl, and R⁷ represents a hydrogen atom, substituted or unsubstituted or unsubstituted aralkyl, CW¹R⁸ (wherein R⁸ represents a hydrogen atom, substituted or unsubstituted alkyl, substituted or unsubstituted alkyl, substituted or unsubstituted alkyl, substituted or unsubstituted alkyl, substituted or unsubstituted aryl, a substituted or unsubstituted heterocyclic group, substituted or unsubstituted aralkyl,

substituted or unsubstituted aralkylamino, or substituted or unsubstituted aralkyloxy, and W^{1} represents an oxygen atom or a sulfur atom), or the formula:

(wherein R⁹ represents a hydrogen atom, substituted or unsubstituted alkyl, or substituted or unsubstituted aralkyl; R¹⁰ represents a hydrogen atom, substituted or unsubstituted alkyl, substituted or unsubstituted aralkyl, CW²R^{8a} (wherein R^{8a} and W² have the same significance meanings as the above R⁸ and W¹, respectively), substituted or unsubstituted alkylsulfonyl, substituted or unsubstituted arylsulfonyl, or PW³R¹²₂ (wherein R¹²'s are the same or different and independently represent substituted or unsubstituted alkyl, or substituted or unsubstituted aryl; and W³ has the same significance meaning as the above W¹); or R⁹ and R¹⁰ together represent the formula:

(wherein Y¹ represents substituted or unsubstituted alkylene or substituted or unsubstituted arylene); and R¹¹ represents a hydrogen atom, substituted or unsubstituted alkyl, or substituted or unsubstituted aralkyl)};

R² represents a hydrogen atom, COR¹³ (wherein <u>{wherein R¹³</u> represents hydroxy, substituted or unsubstituted alkoxy, substituted or unsubstituted

alkenyloxy, substituted or unsubstituted aralkyloxy, substituted or unsubstituted alicyclic alkylalkoxy, substituted or unsubstituted aroylalkoxy, or NR¹⁴R¹⁵ (wherein R¹⁴ represents a hydrogen atom, substituted or unsubstituted alkyl, or substituted or unsubstituted aryl; and R¹⁵ represents substituted or unsubstituted alkyl, substituted or unsubstituted aralkyl, substituted or unsubstituted alkoxycarbonylalkyl, amino, substituted or unsubstituted alkylamino, or substituted or unsubstituted arylamino; or R¹⁴ and R¹⁵ together with the adjacent N form a substituted or unsubstituted heterocyclic group)) or CH₂OR^{3a} (wherein group)} or CH₂OR^{3a} (wherein R^{3a} represents a hydrogen atom, substituted or unsubstituted alkyl, substituted or unsubstituted or unsubstituted or unsubstituted or unsubstituted aralkyl, substituted or unsubstituted alkanoyl, substituted or unsubstituted aroyl, or SiR¹⁶₃ (wherein R¹⁶'s are the same or different and independently represent substituted or unsubstituted alkyl, or substituted or unsubstituted aryl)); aryl)},or R¹ and R² together represent the formula:

$$\begin{array}{c}
O \\
HN \\
\sqrt{R^2}
\end{array}$$

$$\begin{array}{c}
(R^2) \\
V^2 \\
R^1
\end{array}$$

(wherein Y² represents substituted or unsubstituted alkylene);

X¹ represents a bond, substituted or unsubstituted alkylene, substituted or unsubstituted alkylene, or substituted or unsubstituted arylene;

 X^2 represents an oxygen atom, a sulfur atom or NR^{17} (wherein R^{11} represents a hydrogen atom, substituted or unsubstituted alkyl, or substituted or unsubstituted aralkyl);

 R^3 has the same significance meaning as the above R^{3a} ;

 R^4 represents hydroxy, mercapto, substituted or unsubstituted alkoxy, or substituted or unsubstituted alkylthio; or R^3 and R^4 together represent a bond; and

R⁵ represents a hydrogen atom, substituted or unsubstituted alkyl, substituted or unsubstituted alkenyl, or substituted or unsubstituted aralkyl> aralkyl.

- 2. (Currently Amended) The $\underline{\text{method to inhibit}}$ proteasome $\underline{\text{inhibitor}}$ according to claim 1, wherein R^3 and R^4 together represent a bond.
- 3. (Currently Amended) The carboxylic acid derivative or the pharmaceutically acceptable salt thereof method to inhibit proteasome according to claim 1, wherein R⁴ is hydroxy, or substituted or unsubstituted alkoxy; p is 1; R¹ is a hydrogen atom or NR⁶ R⁷ (wherein each of R⁶ and R⁷ has the same significance as defined above), or R¹ and R² together are the formula form:

$$\begin{array}{c|c}
O \\
HN \\
/2 \\
N \\
H
\end{array}$$

$$\begin{array}{c}
(R^2) \\
(R^1) \\
\end{array}$$

(wherein Y^2 has the same significance as defined above); X^1 is substituted or unsubstituted alicyclic alkylene, or substituted or unsubstituted arylene; and X^2 is NR^{17} (wherein R^{17} has the same significance as defined above).

- 4. (Currently Amended) The carboxylic acid derivative or the pharmaceutically acceptable salt thereof method to inhibit proteasome according to claim 1, wherein R^4 is mercapto, or substituted or unsubstituted alkylthio, or R^3 and R^4 together are a bond; X^2 is NR^{17} (wherein R^{17} has the same significance as defined above) [when with the proviso that when m is 0; n and p are 1; R^2 is carboxy; R^3 and R^4 together are a bond; R^5 is sec-butyl; and X^1 is cyclopropylene or ethylene, then R^1 is neither NHC (=O) -C (CH₃) NH_2 nor NHC (=O) -C (CH₃) NHC (=O) O -C (CH₃)₃] (CH₃)₃.
- 5. (Currently Amended) The carboxylic acid derivative or the pharmaceutically acceptable salt thereof method to inhibit proteasome according to claim 3, wherein R¹ is a hydrogen atom or NR⁶ R⁷ (wherein each of R⁶ and R⁷ has the same significance as defined above).
- 6. (Currently Amended) The carboxylic acid derivative or the pharmaceutically acceptable salt thereof method to inhibit proteasome according to claim 5, wherein R¹ is NR⁶R⁷ (wherein each of R⁶ and R⁷ has the same significance as defined above); X¹ is cyclopropylene or alkylene; and X² is NH.

- 7. (Currently Amended) The carboxylic acid derivative or the pharmaceutically acceptable salt thereof method to inhibit proteasome according to claim 4, wherein R⁴ is mercapto, or substituted or unsubstituted alkylthio; R¹ is NR⁶R⁷ (wherein each of R⁶ and R⁷ has the same significance as defined above); and X¹ is cyclopropylene or alkylene.
- 8. (Currently Amended) The carboxylic acid derivative or the pharmaceutically acceptable salt thereof method to inhibit proteasome according to claim 4, wherein R^3 and R^4 together are a bond.
- 9. (Currently Amended) The carboxylic acid derivative or the pharmaceutically acceptable salt thereof method to inhibit proteasome according to claim 8, wherein m is 0; n and p are 1; R¹ is NR⁶ R⁷ (wherein each of R⁶ and R⁷ has the same significance as defined above); R² is COR^{13a} (wherein R^{13a} is alkylamino, aralkyloxy or aralkylamino); R⁵ is alkyl; X¹ is cyclopropylene, alkylene, or substituted or unsubstituted phenylene; and X² is NH.
- 10. (Currently Amended) A process for producing the carboxylic acid derivative according to claim 1 a compound represented by the formula (I) or a pharmaceutically acceptable salt thereof

$$R^1$$
 R^2
 R^3
 R^5
 R^4
 R^5
 R^4

wherein

m and n independently represent an integer of 0 to 10; p represents 0 or 1;

R¹ represents a hydrogen atom, substituted or unsubstituted alkyl, substituted or unsubstituted aralkyl, substituted or unsubstituted aralkyl, substituted or unsubstituted aralkyl, substituted or unsubstituted aralkyl, or substituted or unsubstituted aralkyl, and R² represents a hydrogen atom, substituted or unsubstituted aralkyl, and R² represents a hydrogen atom, substituted or unsubstituted aralkyl, substituted or unsubstituted aralkyl, CW¹R² (wherein R³ represents a hydrogen atom, substituted or unsubstituted alkyl, substituted or unsubstituted alkyl, substituted or unsubstituted or unsubstituted or unsubstituted or unsubstituted or unsubstituted aralkyl, a substituted or unsubstituted aralkyl,

substituted or unsubstituted aralkylamino, or substituted or unsubstituted aralkyloxy, and W¹ represents an oxygen atom or a sulfur atom), or the formula:

(wherein R⁹ represents a hydrogen atom, substituted or unsubstituted alkyl, or substituted or unsubstituted aralkyl; R¹⁰ represents a hydrogen atom, substituted or unsubstituted alkyl, substituted or unsubstituted aralkyl, CW²R^{8a} (wherein R^{8a} and W² have the same meanings as R⁸ and W¹, respectively), substituted or unsubstituted alkylsulfonyl, substituted or unsubstituted arylsulfonyl, or PW³R¹²₂ (wherein R¹²'s independently represent substituted or unsubstituted alkyl, or substituted or unsubstituted aryl; and W³ has the same meaning as W¹); or R⁹ and R¹⁰ together represent the formula:

(wherein Y¹ represents substituted or unsubstituted alkylene or substituted or unsubstituted arylene); and R¹¹ represents a hydrogen atom, substituted or unsubstituted alkyl, or substituted or unsubstituted aralkyl)};

R² represents a hydrogen atom, COR¹³ {wherein R¹³ represents hydroxy, substituted or unsubstituted alkoxy, substituted or unsubstituted alkenyloxy,

substituted or unsubstituted aralkyloxy, substituted or unsubstituted alicyclic alkylalkoxy, substituted or unsubstituted aroylalkoxy, or NR¹⁴R¹⁵ (wherein R¹⁴ represents a hydrogen atom, substituted or unsubstituted alkyl, or substituted or unsubstituted aryl; and R¹⁵ represents substituted or unsubstituted alkyl, substituted or unsubstituted aralkyl, substituted or unsubstituted aralkyl, substituted or unsubstituted or unsubstituted arylamino; or R¹⁴ and R¹⁵ together with the adjacent N form a substituted or unsubstituted heterocyclic group)} or CH₂OR^{3a} {wherein R^{3a} represents a hydrogen atom, substituted or unsubstituted alkyl, substituted or unsubstituted aralkyl, substituted or unsubstituted aroyl, or SiR¹⁶₃ (wherein R¹⁶'s independently represent substituted or unsubstituted alkyl, or substituted or unsubstituted aryl)}, or R¹ and R² together represent the formula:

HN
$$(R^2)$$
 Y^2
 (R^1)
 H

(wherein Y² represents substituted or unsubstituted alkylene);

X¹ represents a bond, substituted or unsubstituted alkylene, substituted or unsubstituted alkylene, or substituted or unsubstituted arylene; and

X² is NR¹⁷ (wherein R¹¹ represents a hydrogen atom, substituted or unsubstituted aralkyl);

R⁵ represents a hydrogen atom, substituted or unsubstituted alkyl, substituted or unsubstituted alkenyl, or substituted or unsubstituted aralkyl, characterized in that comprising the steps of:

reacting a carboxylic acid represented by the formula (II):

$$HO_2C$$
 R^5 (II)

(wherein R⁵ has the same significance as defined above) is reacted with an amine represented by the formula (III):

(wherein each of m, n, p, R[†], R², R^{††} and X[†] has the same significance as defined above).

- 11. (Currently Amended) The carboxylic acid process according to claim 10, wherein R⁵ is substituted or unsubstituted alkyl, substituted or unsubstituted alkenyl, or substituted or unsubstituted aralkyl, or a salt thereof.
- 12. (Currently Amended) The process amine according to claim 10, wherein m is 0; n and p are 1; R¹ is NR⁶R⁷ (wherein each of R⁶ and R⁷ has the same significance as defined above); R² is COR¹³ (wherein R¹³ has the same significance as

defined above) or CH_2OR^{3a} (wherein R^{3a} has the same significance as defined above), or R^1 and R^2 together are the formula:

$$\begin{array}{c}
O \\
HN \\
V^2
\end{array}$$

$$\begin{array}{c}
(R^2) \\
R^1) \\
O \\
\end{array}$$

(wherein y^2 has the same significance as defined above); and X^1 vis cyclopropylene, or a salt thereof.

- 13. (Currently Amended) The amine or the salt thereof process according to claim 12, wherein R^1 is amino and R^{17} is a hydrogen atom.
- 14. (Currently Amended) The amine or the salt thereof process according to claim 13, wherein R^2 is carboxy.

Claims 15-22 (Cancelled).

23. (Currently Amended) A The method to inhibit proteasome comprising a process in which an effective amount of the carboxylic acid derivative or the pharmaceutically acceptable salt thereof according to any one of claims 3 to 9 is administered to a mammal including 1 to 9, wherein said compound is administered to a human.

24. (Currently Amended) A The method of inhibiting proteasome according to claim 23, which is for treatment or prevention of a tumor comprising a step of administering an effective amount of the carboxylic acid derivative or the pharmaceutically acceptable salt thereof according to any one of claims 3 to 9 is administered to a mammal including human.